CONTROLLER FOR CD-AUTOCHANGER

KCA-R200

SERVICE MANUAL

KENWOOD

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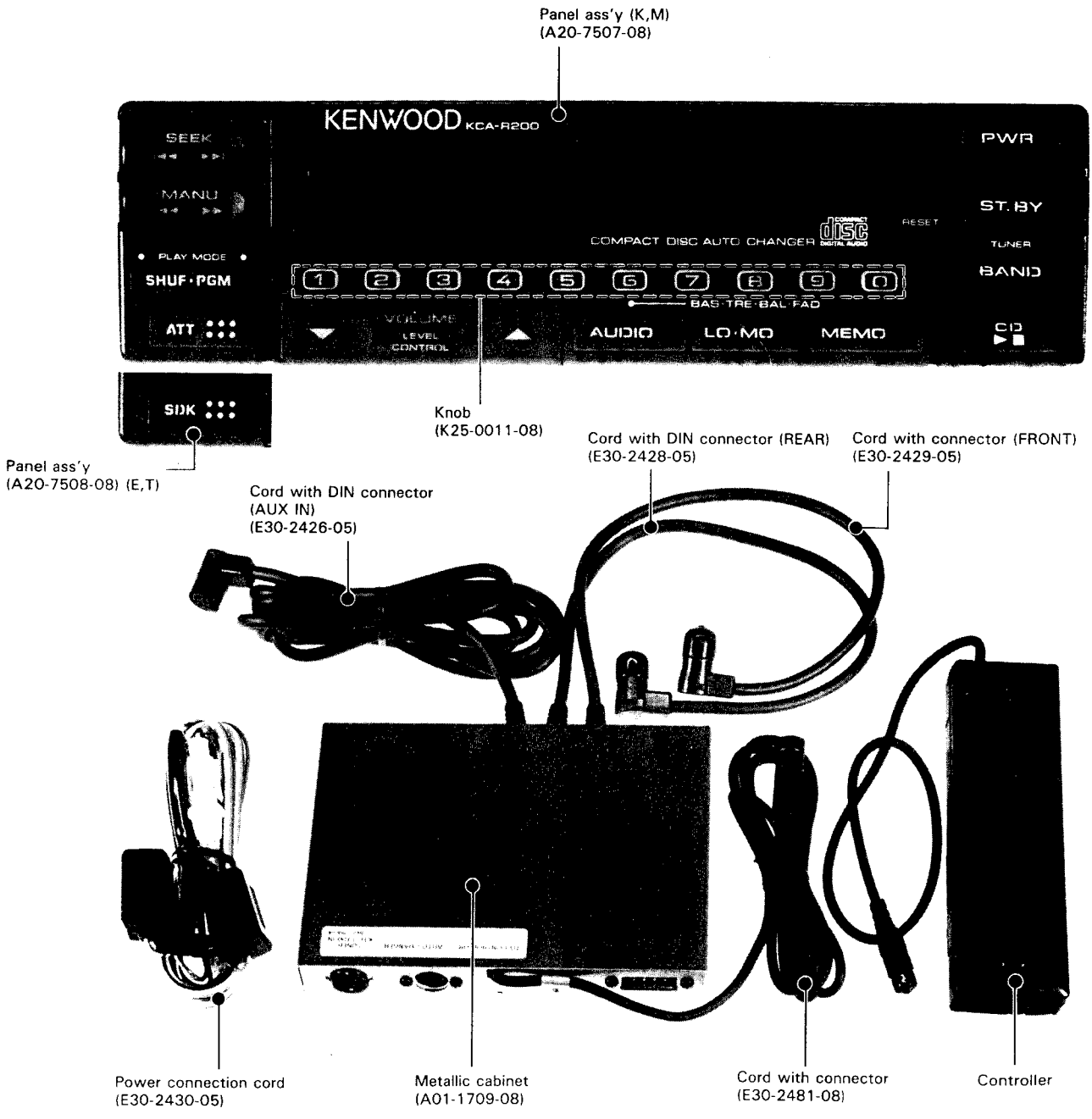

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Precaution for servicing
This component is composed of three units; controller, hide away unit (KCA-R200) and changer (KDC-C200).
Be sure to send all units for servicing to detect the defective unit.

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SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

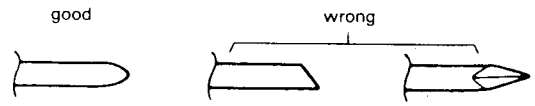
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

Flexible Circuit Board Repairing

1. Keep the temperature of the soldering iron at 270° ± 10°C during repairing.
   You can maintain the temperature of the soldering iron around 270°C by using the thermal controller as illustrated on the right.
2. Do not touch the soldering iron more than 4 seconds or 3 times on the same conductor of the circuit board.
3. Do not apply force on the conductor when soldering or unsoldering.

Tip of soldering iron



[CD]: Switch function or display during Compact Disc player operation.
[TUNER]: Swtich function or display during tuner operation. (When the optional KTC-T100 is used.)

[CD]: Music search switches
During CD play, press either side of this switch to start playback at the beginning of a particular selection.
⏮: To go back to the beginning of a previous selection.
⏭: To skip ahead to the beginning of a later selection.

[TUNER]: Seek tuning switches
Press ⏭ switch for up seek operation.
Press ⏮ switch for down seek operation.
Seek operation automatically stops when a marginal broadcast is received.

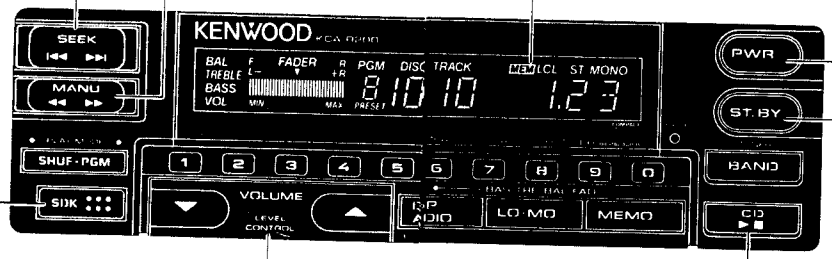
[CD]: Search switches
During CD play, press either side of this switch to search for a particular point on the disc.
◀◀: To go backwards at high speed.
▶▶: To skip ahead at high speed.

[TUNER]: Manual tuning switches
Press this switch once to change the receiving frequency by one step. When this switch is kept pressed, the frequency changes continuously.

Display window
Normally indicates the volume level. When adjusting the Bass, Treble, Balance or Fader control, it shows the corresponding adjustment level.
[CD]: Indicates the Disc No., Track No., playback time and the Program No. "LOAD" will be shown when changing discs.
[TUNER]: Indicates the selected Band, receiving frequency, and Preset No. "ST" will be shown when a stereo broadcast is being received.

Power switch
Turns the power of this unit ON and OFF.

Attenuator switch (K,M)
When this switch is ON, the indicator lights and the volume instantaneously drops. When this switch is pressed again, the indicator goes off and the previous volume resumes.



[TUNER]: SDK switch (E,T)
When this switch is set to ON, the SDK character color turns from amber to green, and the traffic information station is tuned in. When traffic information station is received, the red indicator lights up.

Volume up (▲)/down (▼) switch
Used for volume adjustment. These switches are also used to adjust the Bass, Treble, Balance and Fader.

[CD]: CD switch
Press this switch to start disc play. When it is pressed during play, disc play is suspended at the current position. Pressing it again resumes disc play from the same position. This switch is also used to select the disc to be played.

Stand-by switch
When this switch is pressed, the playing disc or the tuner (KTC-T100) will be turned OFF, and the sound from the component connected to the AUX input jacks can be heard (except some components).

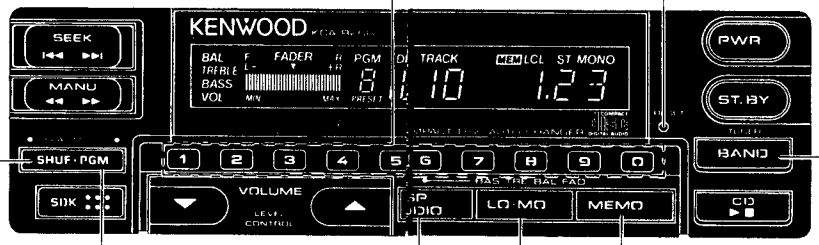
[CD]: Switch function or display during Compact Disc player operation.
[TUNER]: Swtich function or display during tuner operation. (When the optional KTC-T100 is used.)

[CD] : Shuffle switch
When this switch is pressed, shuffle play (playing the selections in a random order) starts.

[CD]: Preset program switches (1 — 0)
Each of these switches can store one of the selections contained on a disc, specified by the Disc No. and Track No.
[TUNER]: Preset station switches (1 — 0)
One switch can memorize one of each FM and AM.

Reset button
When the installation and all the wiring is finished, press this button.
Not usually used however, when the microprocessor (micro-computer) malfunctions, press this button using a sharp-pointed object. When this button is pressed, the unit is reset to its initial state. Therefore, all the memories and clock needs to be adjusted.

[TUNER] : Band switch
With the tuner OFF, pressing this switch turns the tuner ON. With the tuner ON, the switch is used to select the reception band.



[CD]: Program switch
When this switch is pressed, the programmed selections (specified by the Disc No. and Track No.) will be played.

Audio switch
When this switch is pressed, the Bass, Treble, Balance or Fader can be adjusted using the ▲/▼ switch.

[TUNER] : Local/Mono switch
This switch selects Local mode only when a strong signal station is received. It selects Monaural mode when FM reception is noisy.

[CD] : Memory switch
Press this switch to memorize the disc or track for a Preset program switch.
[TUNER]: Memory switch
Press this switch to memorize the frequency during radio reception.

■ Disc play

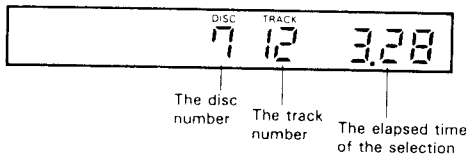
1. Turn the power ON.
2. Set the compact discs in the disc magazine, and load the magazine to the changer.
3. Press the CD switch. disc play starts.
4. Adjust the Volume, Bass, Treble, Balance and Fader controls as required.

Note:

When the volume up (▲) switch is held pressed, the volume is increased to a fixed level, then the incrementing stops. To further increase the volume, release the switch, and then press it again.

5. To place the CD changer in pause mode, press the CD switch. Pressing the CD switch again releases pause mode.
6. To stop disc play, press the Stand-by switch. When the Stand-by switch is pressed, the sound from the component connected to the AUX input jacks is heard (except some components).
7. To recall a required disc in the magazine, press the corresponding Disc No. of the Preset program switches, then within 5 seconds, press the CD switch. While the disc is being changed, "LOAD" is shown in the display window.
8. To recall a required track, press the Track No. of the Preset program switches, then within 5 seconds, press the Music search switch.

Display window



NOTE

At the end of the disc

When disc reaches the end of the last selection of the disc, play of the next disc starts automatically. At the end of the last disc, the unit will go back to the beginning of the first disc, and the play will restart.

When no disc is in the changer

- When the CD switch is pressed without the disc magazine in the changer, [E-01] is displayed. Insert the disc magazine into the changer and press the CD switch.
- When the CD switch is pressed with no disc in the disc magazine, [E-02] is displayed. Insert the disc into the disc magazine and press the CD switch.

When the tuner is connected

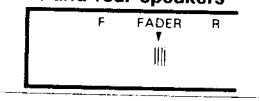
The disc play also stops when the Band switch is pressed. To restart disc play, press the CD switch. Play will start from the point at which play was stopped.

This unit will automatically start playing in the following case

If the car ignition key is turned off during play and turned to the IGN (ignition) or ACC (accessory) position again within 32 seconds, the unit will restart the play from the same point. If the key is turned to the IGN (ignition) or ACC (accessory) position again after 32 seconds, the unit will restart from the beginning of the selection that was being played.

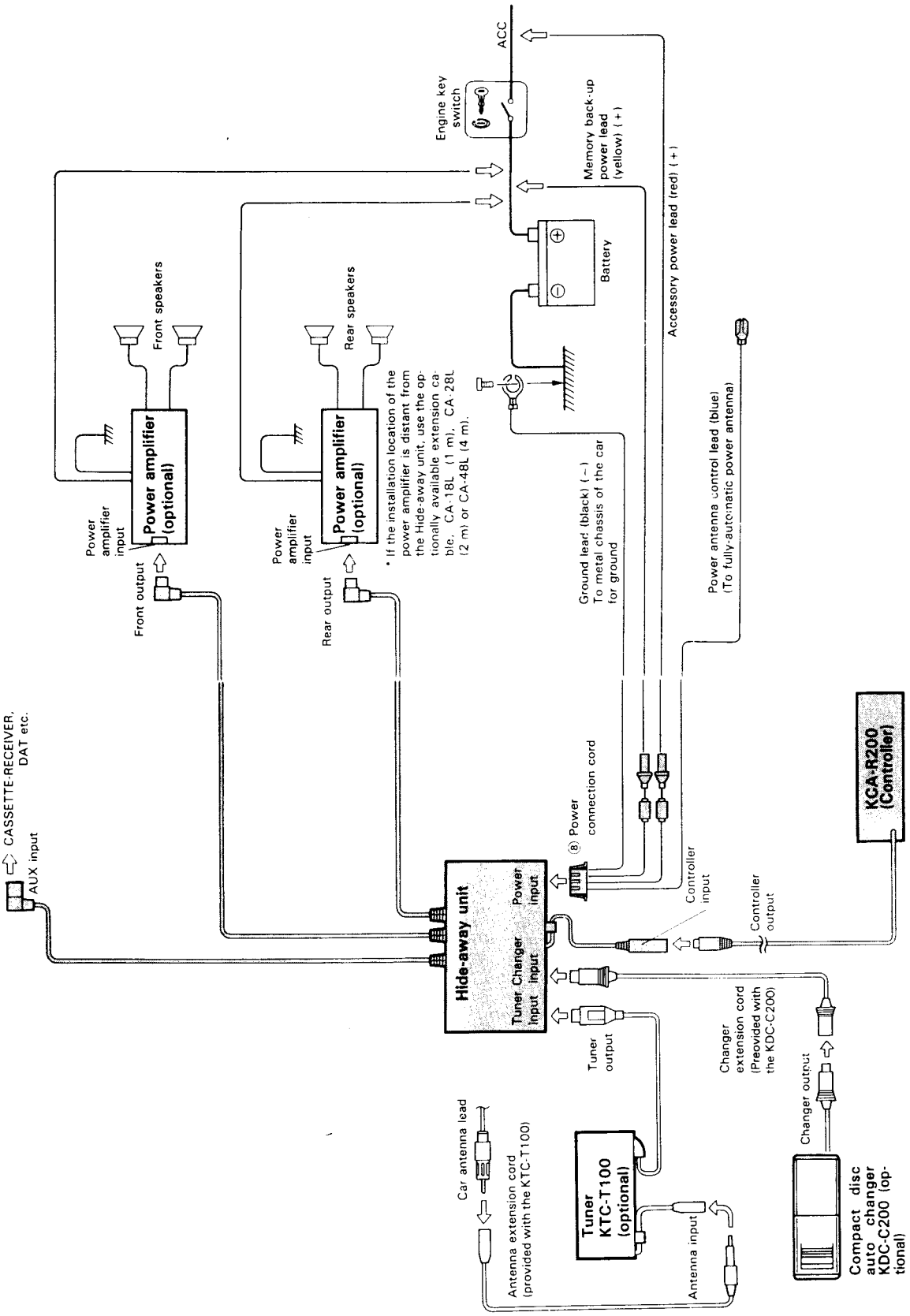
■ Adjusting the volume level and sound quality

1. The Volume up/down (▲/▼) switch are normally used to adjust the volume level. However, each time the Audio switch is pressed, the control function is changed in the order Bass, Treble, Balance, Fader, then Volume again.
2. Referring to the table below, adjust with the Volume up/down (▲/▼) switch.

Display	Volume ▲/▼ switch (Keep pressed or press repeatedly.)	
	The side of ▼ (Left side)	The side of ▲ (Right side)
Adjust the Volume	Volume decreases.	Volume increases.
Adjust the Bass response	Bass decreases.	Bass increases.
Adjust the Treble response	Treble decreases.	Treble increases.
Adjust the Balance of the right and left channels	The level of the right speakers decreases.	The level of the left speakers decreases.
Adjust the Balance of the front and rear speakers 	The level of the rear speakers decreases.	The level of the front speakers decreases.

* When the Audio switch or either of the Volume up/down (▲/▼) switches is not pressed for more than 5 seconds, the volume control function resumes.

CONNECTION


ACC
Engine key switch
Memory back-up power lead (yellow) (+)
Battery
Accessory power lead (red) (+)
Front speakers
Rear speakers
Power amplifier (optional)
Power amplifier input
Front output
Rear output
• If the installation location of the power amplifier is distant from the Hide-away unit, use the optionally available extension cable. CA-18L (1 m), CA-28L (2 m) or CA-48L (4 m).
Ground lead (black) (–) To metal chassis of the car for ground
Power antenna control lead (blue) (To fully-automatic power antenna)
CASSETTE-RECEIVER, DAT etc.
AUX input
Hide-away unit
Power input
Tuner input
Changer input
Power connection cord
Controller input
Controller output
KCA-R200 (Controller)
Tuner output
Changer extension cord (Preovided with the KDC-C200)
Changer output
Car antenna lead
Antenna extension cord (provided with the KTC-T100)
Tuner KTC-T100 (optional)
Antenna input
Compact disc auto changer KDC-C200 (optional)

TROUBLESHOOTING

Other than the previous, the remote control unit displays various error indications to show the following messages. (Each indication blinks for 2 seconds.)

E-01: No disc magazine in the changer, or the magazine is not set completely.
E-02: No discs in the disc magazine.
E-03: The specified track is not present on the disc.
(Example: This appears when the 15th track is specified for a disc on which only 10 tracks are contained.)
E-04: Disc is too dirty.
Condensation has occurred on the disc, or water drops are on the disc.
Disc is set upside down.
E-05: PGM button is pressed with no program.
E-99: Operation incorrect due to something being defective.
Press the reset switch on the controller unit.
If the "E-99" indication does not disappear with this operation, consult your nearest KENWOOD Service Agent.
WAIT:
- When the temperature exceeds 60°C, the protection circuit is engaged to stop any operation. At this time, this indication will appear.
- Open a window or turn the air-conditioner ON to lower the temperature. After a while, this indication will go out.
- This indication also appears for several seconds when making connections, or when the reset button is pressed.
- If the "WAIT" indication does not disappear, the main changer unit may be disconnected.

LOAD: This indication appears while a disc is being changed inside the changer.

* When no indicator appears in the controller and only illumination appears, the cable connector may nearly be disconnected.

XCA-R200

VOLTAGE TABLES

CONTROLLER SECTION

IC801

1	4.6V
2	–
3	4.6V
4	4.9V
5	4.9V
6	4.9V
7	4.9V
8 ~ 16	–

IC802

1 ~ 28	–
29 ~ 32	4.6V
33	–
34 ~ 36	4.6V
37	–
38	4.6V
39 ~ 40	–
41	4.9V
42 ~ 45	–
46 ~ 53	–
54	4.9V
55 ~ 64	–
65	4.9V
66 ~ 67	–
68	4.8V
69 ~ 80	–

Q801

E	4.9V
C	8.4V
B	–

Q802

E	–
C	4.8V
B	–

Q803

E	–
C	–
B	–

HIDE-AWAY SECTION

IC101

1	4.4V
2	4.4V
3	1.6V
4	–
5	1.6V
6	4.2V
7	4.4V
8	8.3V

IC102

1 ~ 7	–
8	8.3V

IC201

1	4.4V
2	4.4V
3	1.6V
4	–
5	1.6V
6	4.4V
7	4.4V
8	8.3V

IC301

1	4.4V
2	4.4V
3	3.9V
4	–
5	3.9V
6	4.4V
7	4.4V
8	8.3V

IC302

1	–
2	4.2V
3	–
4	4.2V
5	4.1V
6	1.6V
7	–
8	4.2V
9	4.2V
10	–
11 ~ 14	4.2V
15	–
16	4.5V
17	0V
18	–
19	–
20	0V
21	4.8V
22	0V
23 ~ 29	4.2V
30	–
31 ~ 33	4.2V
34	–
35	4.2V
36	–
37	–
38 ~ 40	4.2V
41	–
42	7.6V
43	8.3V
44	–
45 ~ 47	4.2V
48	–

IC303

1 ~ 3	4.2V
4 ~ 7	–
8	8.3V

IC304

1	0V
2	4.8V
3	–

IC305

1 ~ 6	–
7	4.5V
8	4.6V
9 ~ 11	–
12	4.8V
13	–
14 ~ 21	–
22	4.8V
23	–
24	4.8V
25	4.8V
26	–
27	5.5V
28	–
29	4.9V
30 ~ 33	–
34	4.4V
35 ~ 40	–
41	4.8V
42	4.4V
43	0V
44	4.4V
45	–
46	–
47	4.8V
48	4.8V
49	4.6V
50	0V
51 ~ 53	–
54	0V
55	0V
56	4.5V
57	4.5V
58	4.8V
59 ~ 64	–

IC306

1	4.4V
2	–
3	–

Q101, Q102, Q201, Q202, Q305, Q306, Q315

E	–
C	–
B	–

Q301

E	–
C	14V
B	–

Q302

E	–
C	5.5V
B	–

Q303

E	–
C	14V
B	4.8V

Q304

E	8.3V
C	14V
B	–

Q310, Q312

E	–
C	–
B	4.8V

Q311

E	–
C	14.4V
B	–

Q313

E	14.4V
C	–
B	–

Q314

E	5.5V
C	14.4V
B	–

Q316

E	–
C	4.8V
B	–

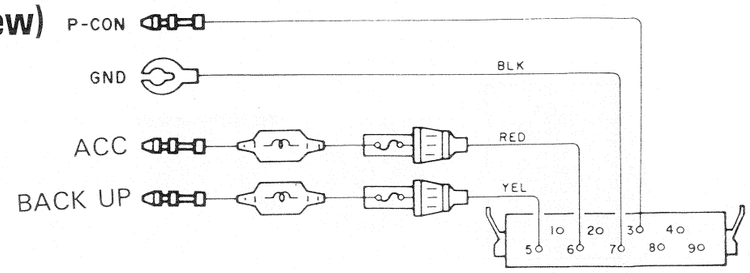
Q319

E	8.4V
C	14V
B	–

Q401

E	–
C	–
B	2.4V

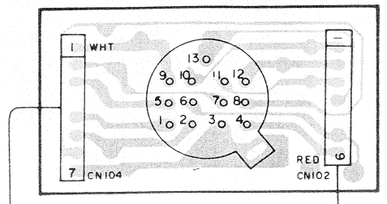
PC BOARD (Component side view)



1	N.C.
2	N.C.
3	P-CON
4	N.C.
5	RST
6	DK
7	GND
8	N.C.
9	N.C.

1	ACC
2	B.UP
3	GND
4	DISP SELECT
5	SIGNAL. GND
6	CD RESET
7	SIGNAL.GND
8	MUTE
9	SIGNAL. L
10	DATA. IN
11	DATA. OUT
12	CLCK. IN
13	CLCK. OUT

CD CHANGER

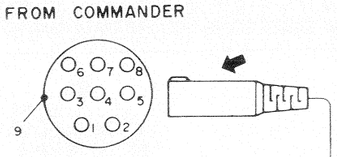


HIDE-AWAY SECTION

Ref. No. IC	Ref. No. Q	Address
	101	6F
	102	6D
	201	6E
	202	6F
	301	5J
	302	3G
	303	5J
	304	4E
	305	6H
	306	6H
	307	4H
	310	4E
	311	4E
	312	3F
	313	3F
	314	5E
	315	4I
	316	4I
	319	4E
	401	3F
101		5G
102		6E
201		5H
202		5I
301		6I
302		5G
303		6F
304		5F
305		3G
306		3F

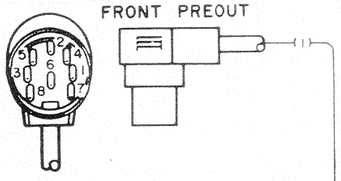
1	S. DATA
2	RESET
3	ACC 8.5V
4	CLK
5	REQ. OUT
6	POWER
7	DATA
8	ILL
9	GND

FROM COMMANDER



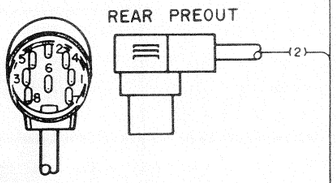
1	Lch
2	GND
3	P-CONT
4	Rch
5	N.C.
6	N.C.
7	N.C.
8	N.C.

FRONT PREOUT



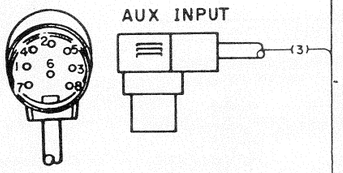
1	Lch
2	GND
3	P-CONT
4	Rch
5	RST
6	DK
7	N.C.
8	N.C.

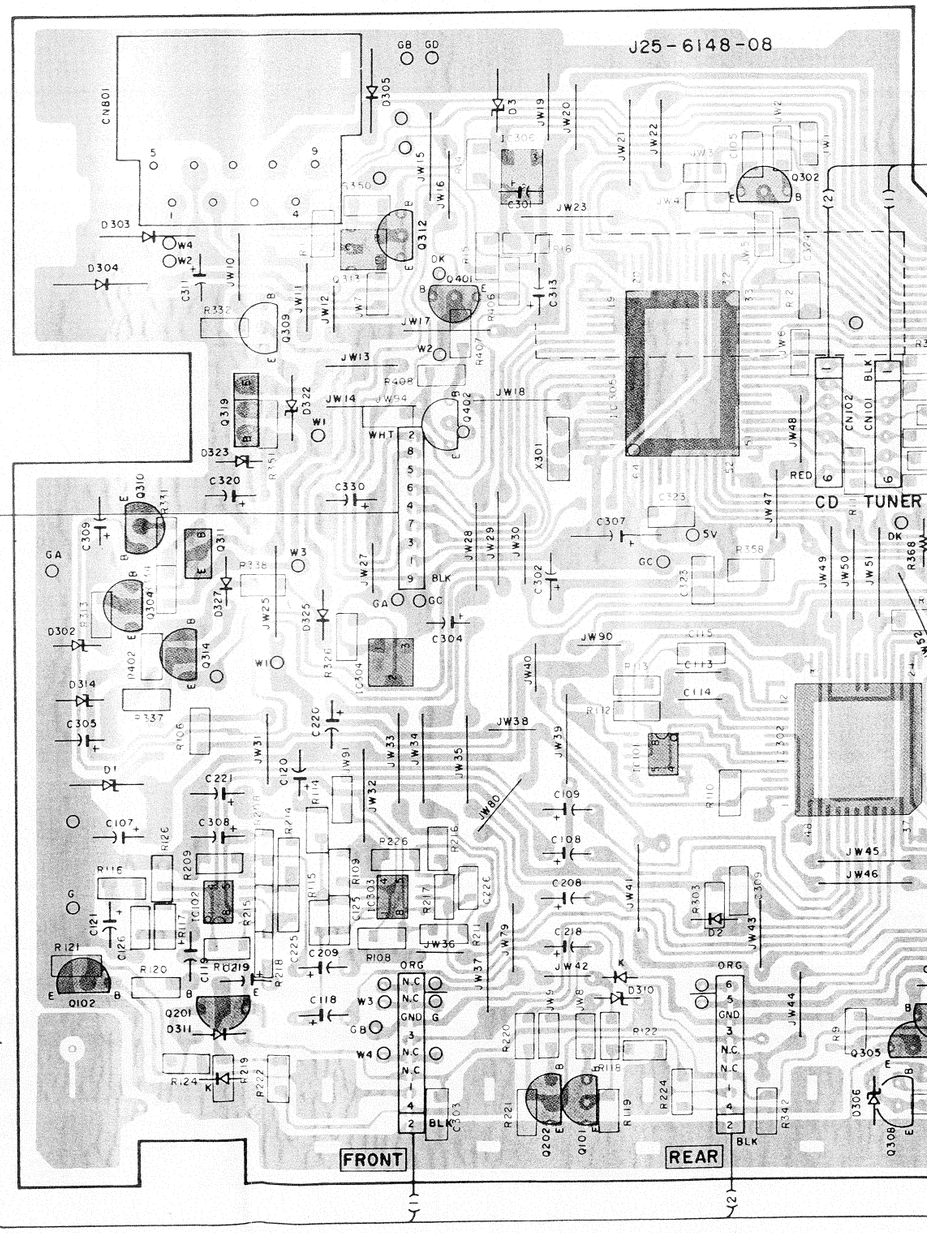
REAR PREOUT



1	Lch
2	GND
3	P-CONT
4	Rch
5	N.C.
6	N.C.
7	N.C.
8	N.C.

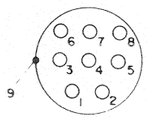
AUX INPUT





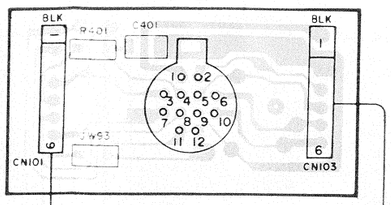
1	DATA. OUT
2	TUNER RESET
3	DISP. SELECT
4	CLCK OUT
5	GND
6	ACC-C
7	DATA IN
8	CLCK. IN
9	SIGNAL. L
10	SIGNAL. GND
11	B. UP
12	SIGNAL. R

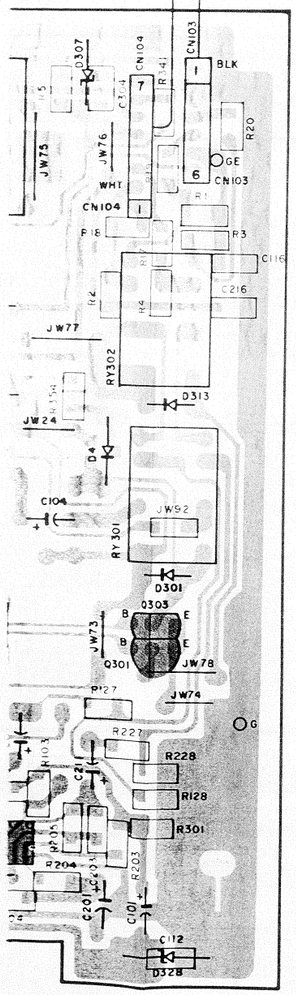
1	S. DATA
2	RESET
3	ACC 8.5V
4	CLK
5	REQ. OUT
6	POWER
7	DATA
8	ILL
9	GND

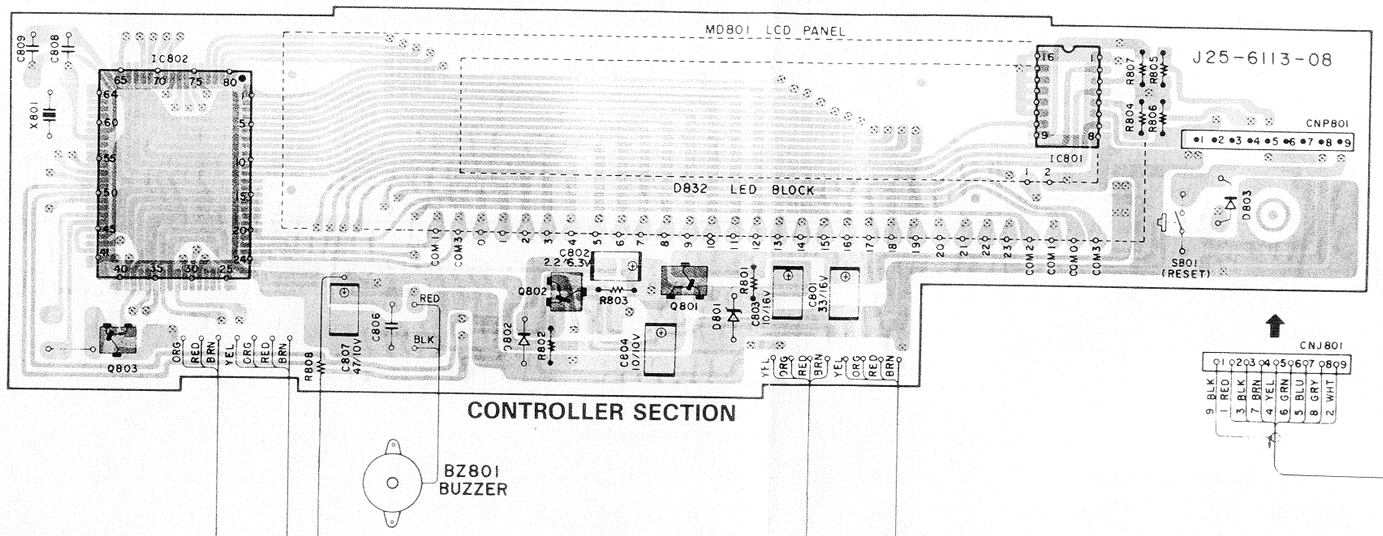


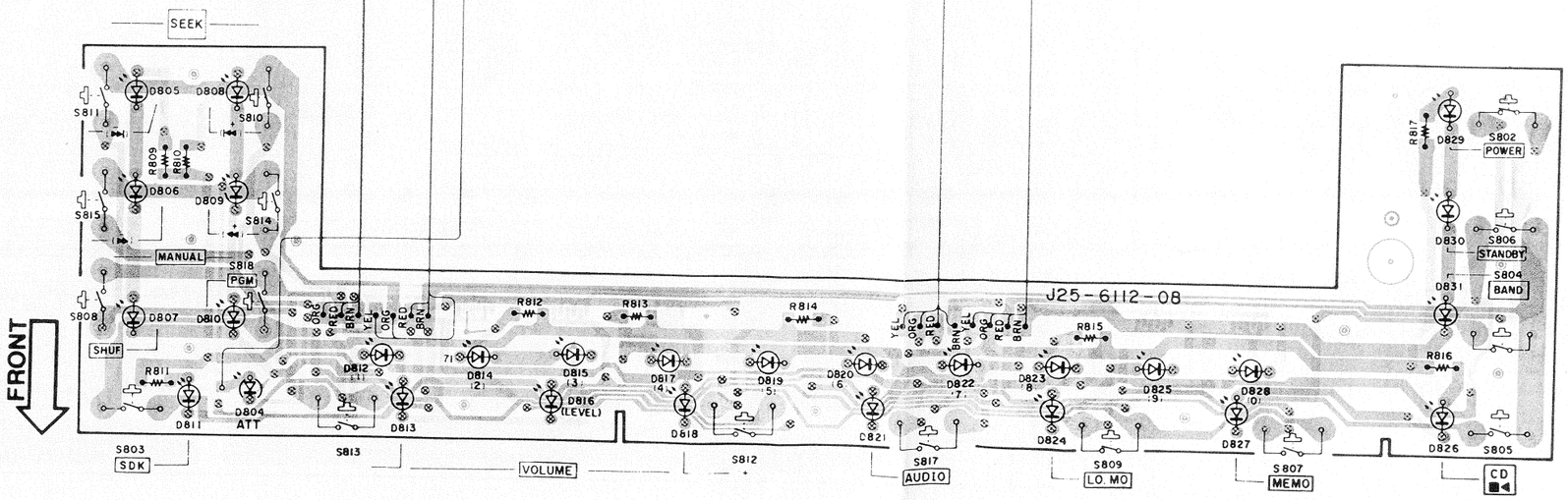
TO HIDE-AWAY UNIT

TUNER









CONTROLLER SECTION

Ref. No.		Address
IC	Q	
	801	3N
	802	3M
	803	4L
801		3O
802		3L

KCA-R200 (K)

Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD (Foil side view)

CONTROLLER SECTION

Ref. No.		Address
IC	Q	
	801	3X
	802	4Y
	803	4Z
801		3W
802		3Z

TO HIDE-AWAY UNIT

1	S. DATA
2	RESET
3	ACC 8.5V
4	CLK
5	REQ. OUT
6	POWER
7	DATA
8	ILL
9	GND

1	DATA. OUT
2	TUNER RESET
3	DISP SELECT
4	CLCK. OUT
5	GND
6	ACC-C
7	DATA. IN
8	CLCK. IN
9	SIGNAL. L
10	SIGNAL. GND
11	B.UP
12	SIGNAL. R

TUNER

CD CHA

HIDE

J25-6113-08

ND801 LCD PANEL

D832 LED BLOCK

IC801

IC802

Q801

Q802

Q803

CONTROLLER SECTION

BZ801 BUZZER

J25-6112-08

FRONT

SEEK

VOLUME

MANUAL

SHUF

CD

MEMO

LO.MO

AUDIO

SDK

ATT

POWER

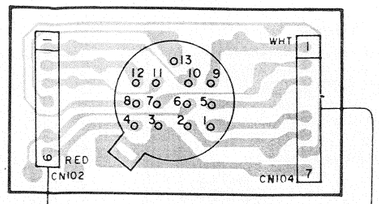
STANDBY

BAND

PGM

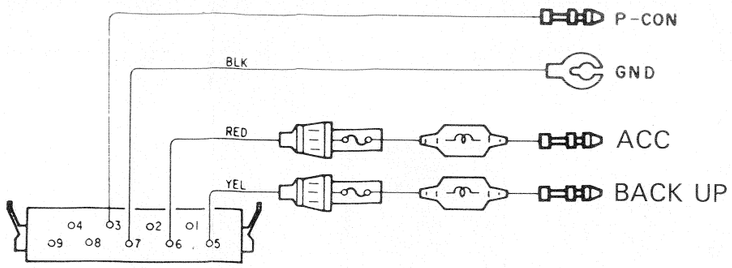
LEVEL

CD CHANGER

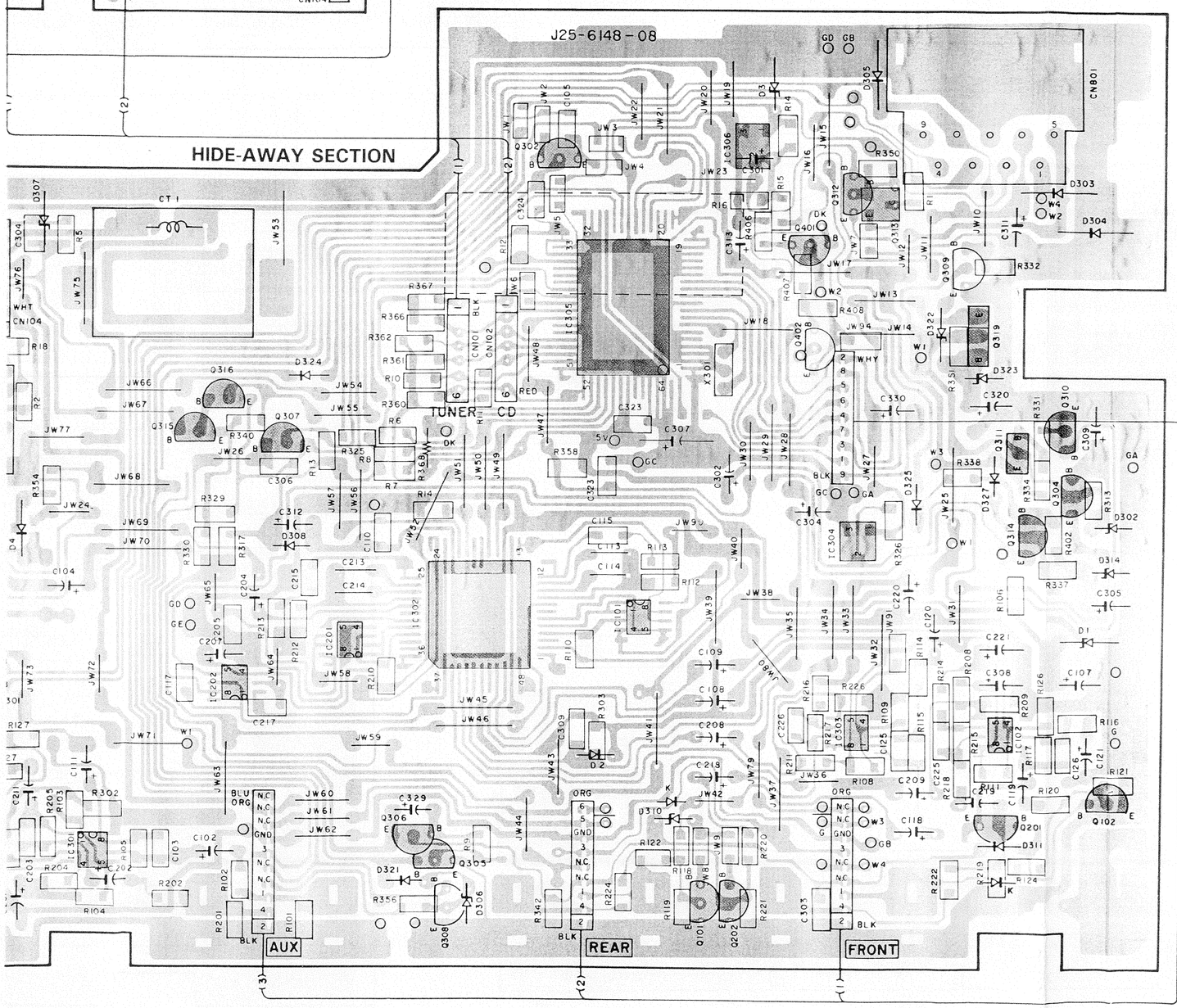


1	ACC
2	B.UP
3	GND
4	DISP SELECT
5	SIGNAL.GND
6	CD.RESET
7	SIGNAL.GND
8	MUTE
9	SIGNAL.L
10	DATA.IN
11	DATA.OUT
12	CLCK.IN
13	CLCK.OUT

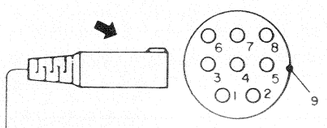
1	N.C.
2	N.C.
3	P-CON
4	N.C.
5	RST
6	DK
7	GND
8	N.C.
9	N.C.



HIDE-AWAY SECTION

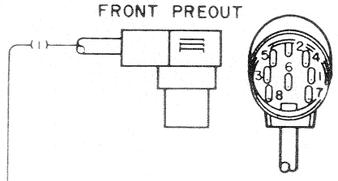


FROM COMMANDER



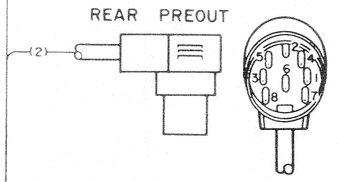
1	S DATA
2	RESET
3	ACC 8.5V
4	CLK
5	REQ.OUT
6	POWER
7	DATA
8	ILL
9	GND

FRONT PREOUT



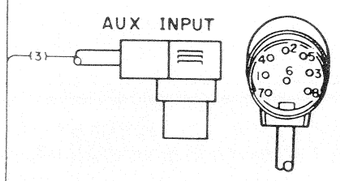
1	Lch
2	GND
3	P-CONT
4	Rch
5	N.C.
6	N.C.
7	N.C.
8	N.C.

REAR PREOUT



1	Lch
2	GND
3	P-CONT
4	Rch
5	RST
6	DK
7	N.C.
8	N.C.

AUX INPUT



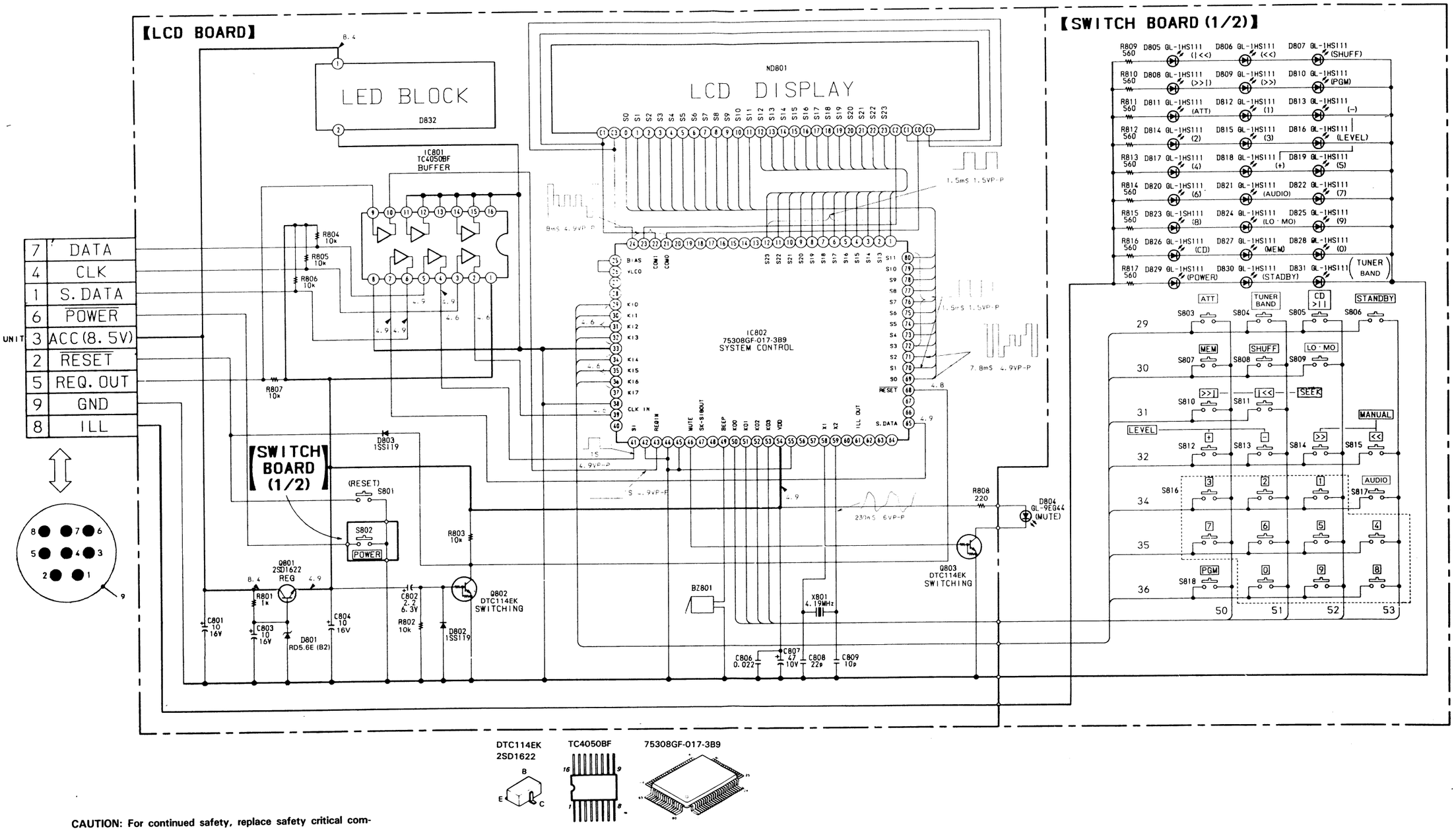
1	Lch
2	GND
3	P-CONT
4	Rch
5	N.C.
6	N.C.
7	N.C.
8	N.C.

KCA-R200 (K)

HIDE-AWAY SECTION

Ref. No. IC	Ref. No. Q	Address
	101	6AF
	102	5AH
	201	5AG
	202	6AF
	301	5AB
	302	3AE
	303	5AB
	304	4AH
	305	6AE
	306	6AD
	307	4AD
	310	4AG
	311	4AG
	312	3AF
	313	3AG
	314	4AG
	315	4AC
	316	4AC
	319	3AG
	401	3AF
101		5AE
102		5AG
201		5AD
202		5AC
301		6AC
302		5AE
303		5AF
304		5AG
305		3AE
306		3AF

Refer to the schematic diagram for the values of resistors and capacitors.



CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

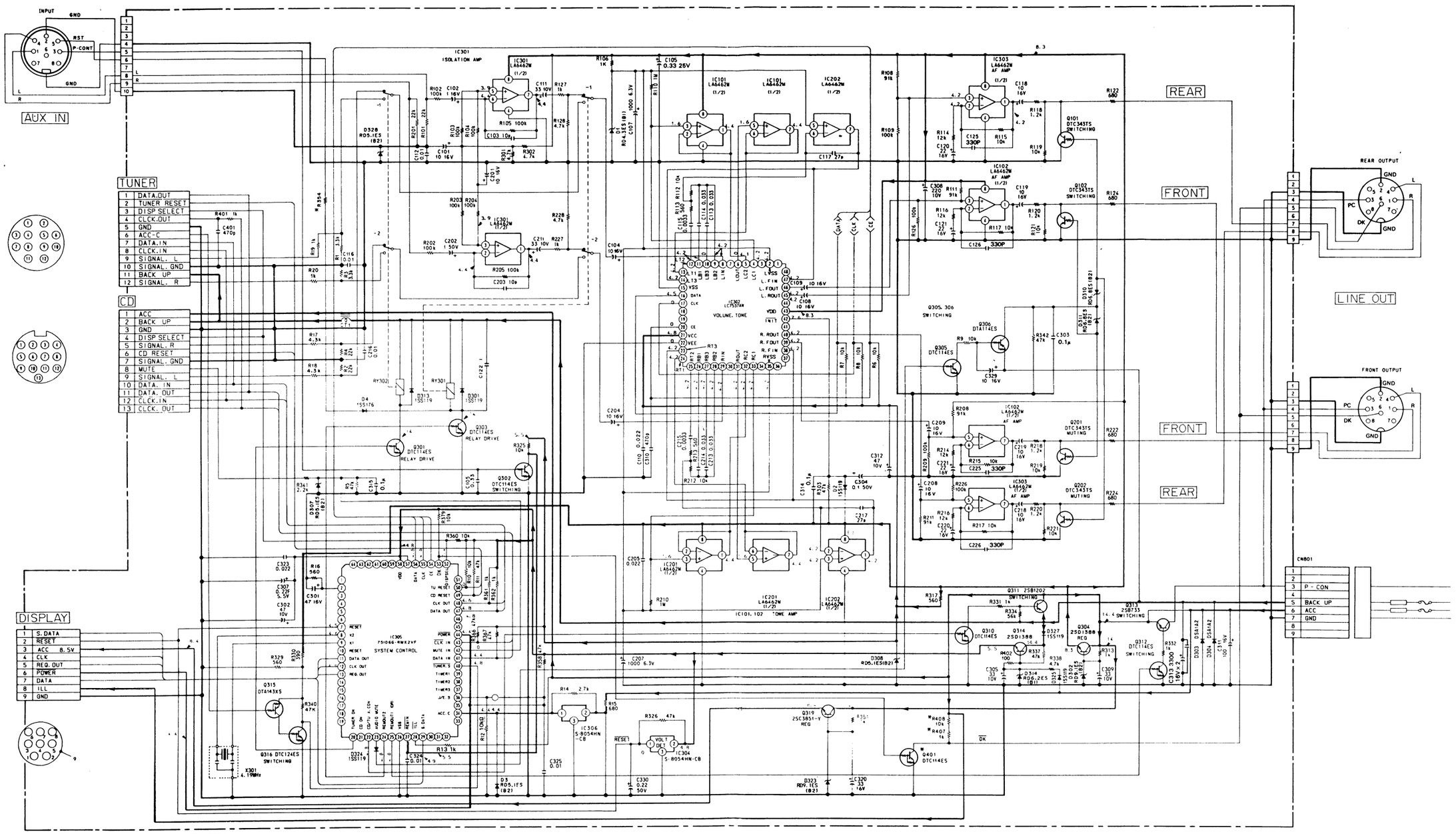
Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig.

CONTROLLER

KCA-R200

KENWOOD

Y23-1990-11



DESTINATION \ Ref.	R364	R367	R379	R407	R408	Q401
K, M	0	NO	NO	NO	NO	NO
E, T	100	YES	YES	YES	YES	YES

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

KDC-C100 (K)

2SD1388 — DTA114ES, DTA143XS, DTC114ES — DTC114EK, DTC124EK — 2SB1202 — 2SB733 — 2SC3851 — S-8054HN-CB — 75106G-RMX2VF — LC7537AN — LA6462M

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig.

HIDE-AWAY

KCA-R200

KENWOOD

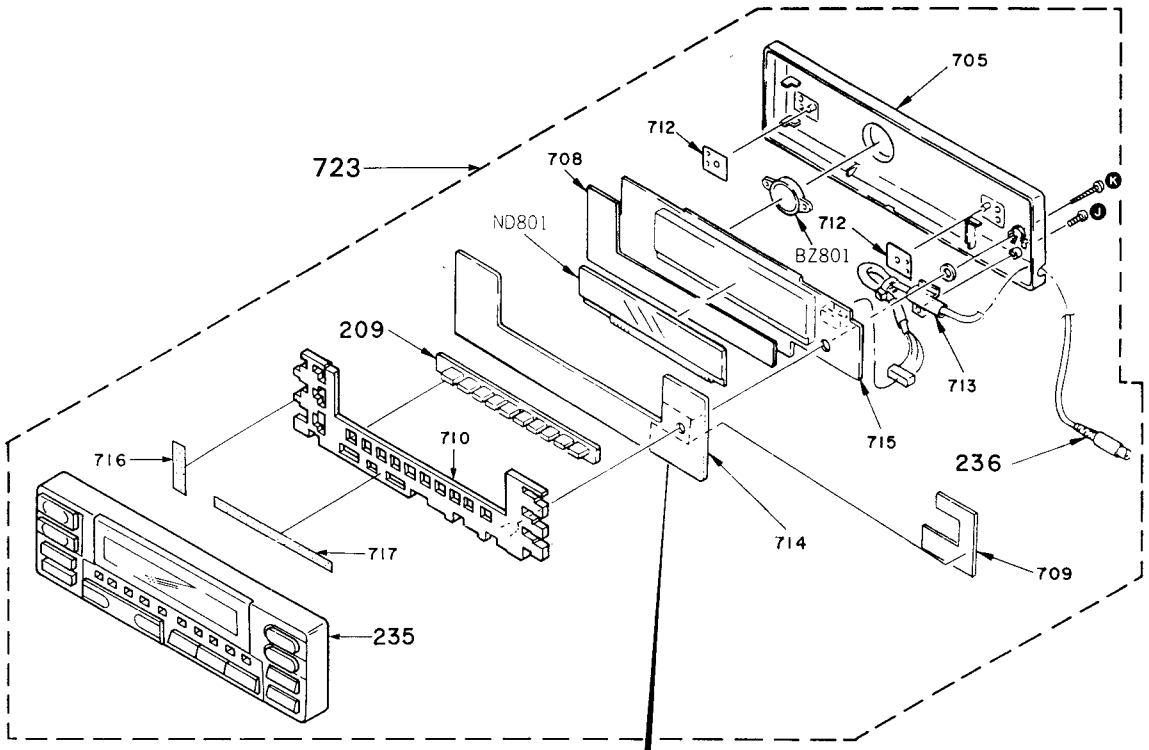
Y23-1990-11

EXPLODED VIEW (UNIT)

K L

1 2 3

K : N09-2621-08
J : N09-2622-08



SEEK			
S811	D805	D808	S810
MANU			
S815	D806	D809	S814
SHUF·PGM			
S808	D807	D810	S818
SDK			
S803	D811	D804	

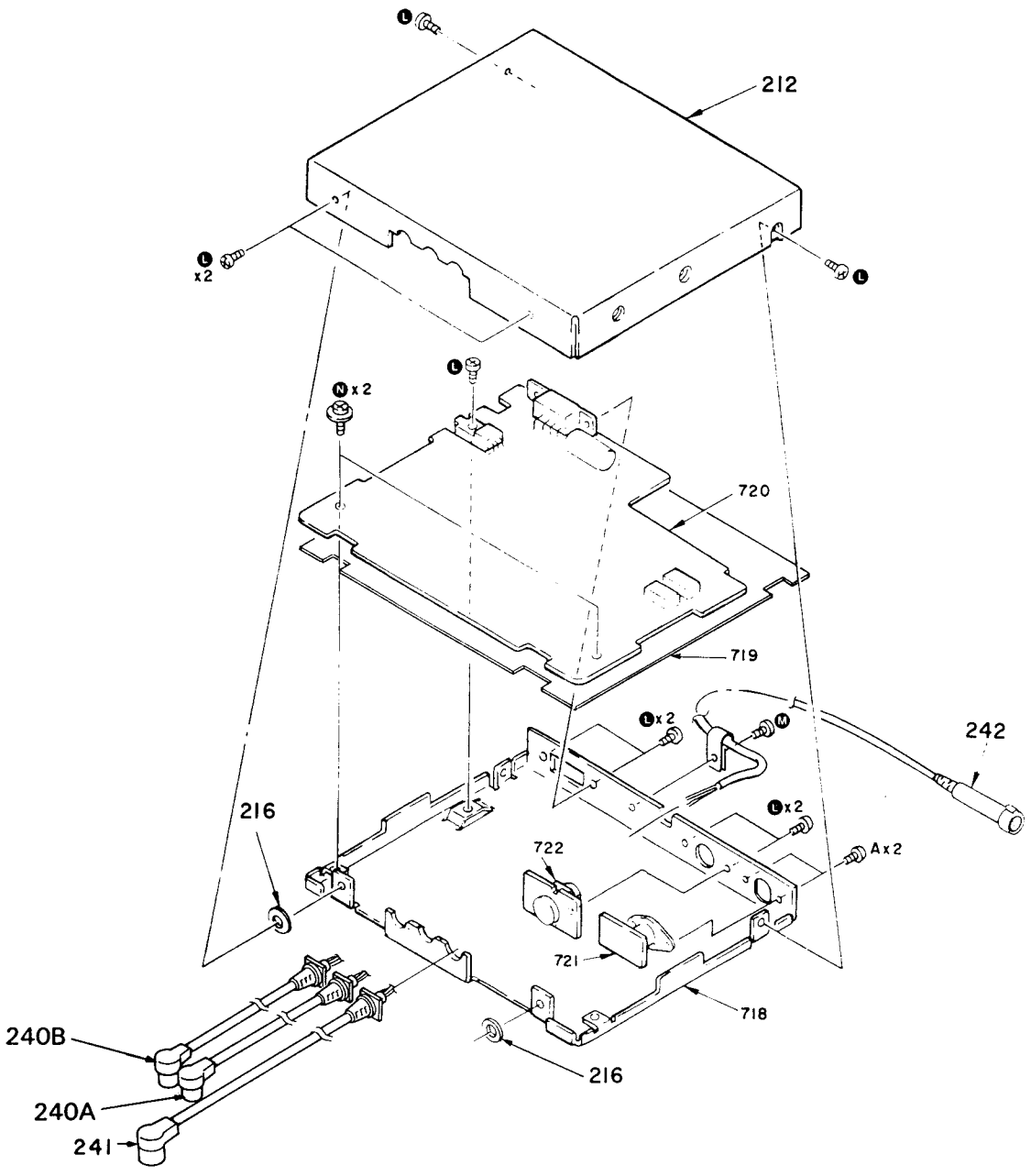
1	2	3	4	5	6	7	8	9	10
S816									
D812	D814	D815	D817	D819	D820	D822	D823	D825	D828
VOLUME				AUDIO		LO·MO		MEMO	
S813	D813	D818	S812	D821	S817	D824	S809	D827	S807
	D816								

PWR	
D829	S802
ST.BY	
D830	S806
BAND	
D831	S804
CD ▶■	
D826	S805

KCA-R200
(CONTROLLER)

Parts with the exploded numbers larger than 700 are not supplied.

EXPLODED VIEW (UNIT)

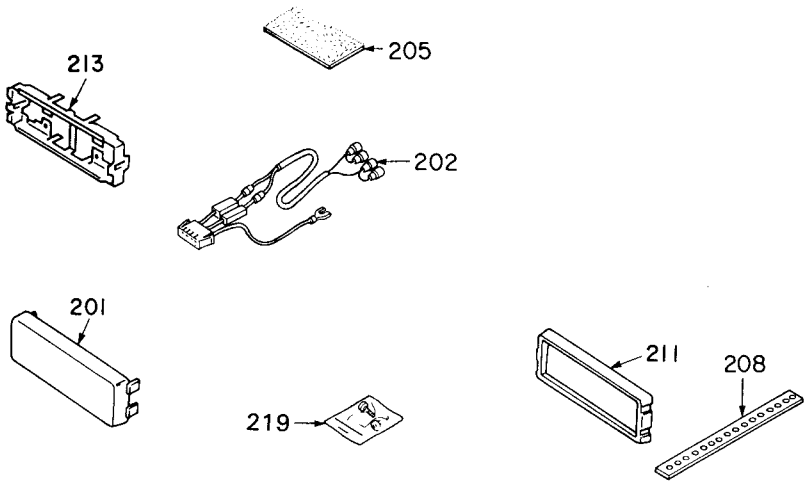


L	: N09-0395-05
M	: N09-1337-05
N	: N09-2623-08
A M2x6	: N30-2006-46

KCA-R200
(HIDE-AWAY)

Parts with the exploded numbers larger than 700 are not supplied.

EXPLODED VIEW (UNIT)



KCA-R200

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
KCA-R200						
201	1Ø		B07-1886-08	PANEL FRAME (CØNT/HIDE-AWAY)		
-			B46-0100-10	WARRANTY CARD		
-			B50-9956-00	INSTRUCTIØN MANUAL	ET	
-		*	B50-9962-00	INSTRUCTIØN MANUAL	KM	
-			B58-0871-04	CAUTIØN CARD		
202	1Ø		E30-2430-05	PØWER CØNNECTIØN CØRD		
205	1Ø		H30-0067-08	MAGIC TAPE		
-		*	H01-9021-08	ITEM CARTØN CASE	KM	
-		*	H01-9022-08	ITEM CARTØN CASE	ET	
-		*	H03-3012-08	ØUTER PACKING CASE		
-			H10-3769-08	PØLYSTYRENE FØAMED FIXTURE(BØT		
-			H11-0026-08	PØLYSTYRENE FØAMED BØARD		
208	1P		J21-5409-08	METAL MØUNTING STRAP		
211	1Ø		F07-0556-08	PRØTECTIØN PANEL(CØNT/HIDE-AWA		
213	1Ø		J21-5461-08	MØUNTING METAL FITTING(CØNT/HI		
219	1P		N99-0285-08	SCREW SET (M4X6)		
CONTROLLER SECTION						
235	3K	*	A20-7507-08	PANEL ASSY	KM	
235	3K	*	A20-7508-08	PANEL ASSY	ET	
ND801	2K,2L		B38-0116-08	DISPLAY ASSY		
236	2L		E30-2480-08	CØRD WITH CØNNECTØR		
209	2K		K25-0011-08	KNØB (S816)		
J	2L		N09-2621-08	SCREW (φ2X4)		
K	2L		N09-2622-08	SCREW (φ2.6X10)		
BZ801	2L		T95-0106-08	PIEZØELECTRIC VIBRATØR		
HIDE-AWAY SECTION						
212	1N		A01-1709-08	METALLIC CABINET(UPPER)		
240A	3M		E30-2428-05	CØRD WITH DIN CØNNECTØR (REAR		
240B	3M		E30-2429-05	CØRD WITH DIN CØNNECTØR (FRØNT		
241	3M		E30-2426-05	CØRD WITH DIN CØNNECTØR(AUX IN		
242	2N		E30-2481-08	CØRD WITH CØNNECTØR		
216	2M		N19-1180-08	FLAT WASHER		
A			N30-2006-46	PAN HEAD MACHINE SCREW(M2X6)		
L	1M,1N		N09-0395-05	SCREW (φ3X6)		
M	2N		N09-1337-05	SCREW (φ3X5)		
N	2M		N09-2623-08	SCREW(TP) (M3X5)		
ELECTRIC CIRCUIT MODULE (CONTROLLER SECTION)						
D805-810			B30-1251-08	LED		
D811			B30-1252-08	LED		
D812-831			B30-1251-08	LED		
D832			B30-1253-08	LED BLØCK		
C801			C92-0505-05	TANTAL 10UF 16WV		
C802			C92-0005-05	CHIP-TAN 2.2UF 6.3WV		
C803,804			C92-0505-05	TANTAL 10UF 16WV		
C806			CK73EB1H223K	CHIP C 0.022UF K		
C807			C92-0051-08	ELECTRØ 47UF 10WV		

E: Scandinavia & Europe K: USA P: Canada
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UE: AAFES(Europe) X: Australia

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C808			CC41DSL1H220J	CYLND CHIP C 22PF J		
C809			CC41DSL1H100J	CYLND CHIP C 10PF J		
X801			L78-0251-08	RESONATOR		
R801			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R802-807			RK73EB2B103J	CHIP R 10K J 1/8W		
R808			RK73EB2B221J	CHIP R 220 J 1/8W		
R809-817			RK73EB2B561J	CHIP R 560 J 1/8W		
S801-815			S59-1086-08	SWITCH		
S817,818			S59-1086-08	SWITCH		
D801			RD5.6ES(B2)	ZENER DIODE		
D802,803			1SS119	DIODE		
D804			B30-1254-08	LED (ATT/SDK)		
IC801			TC4050BF	IC(BUFFER/CONVERTER X6)		
IC802			75308GF-017-3B9	IC(MICROPROCESSOR)		
Q801			2SD1622	TRANSISTOR		
Q802,803			DTC114EK	DIGITAL TRANSISTOR		
ELECTRIC CIRCUIT MODULE (HIDE-AWAY SECTION)						
C101			CE04NW1C100M	ELECTRO 10UF 16WV		
C102			CE04NW1C010M	ELECTRO 1.0UF 16WV		
C103			CC41DSL1H100J	CYLND CHIP C 10PF J		
C104			CE04NW1C100M	ELECTRO 10UF 16WV		
C105			CK73FE1E334Z	CHIP C 0.33UF Z		
C107			C90-1735-08	ELECTRO 1000UF 6.3WV		
C108,109			CE04NW1C100M	ELECTRO 10UF 16WV		
C110			CK41DF1E223Z	CYLND CHIP C 0.022UF Z		
C111			CE04NW1A330M	ELECTRO 33UF 10WV		
C112			CK41DY1C103M	CYLND CHIP C 0.010UF M		
C113,114			CF92V1H333J	MF 0.033UF J		
C115			CK41DX1C332M	CYLND CHIP C 3300PF M		
C116			CK41DY1C103M	CYLND CHIP C 0.010UF M		
C117			CC41DSL1H270J	CYLND CHIP C 27PF J		
C118,119			CE04NW1C100M	ELECTRO 10UF 16WV		
C120,121			CE04NW1C220M	ELECTRO 22UF 16WV		
C122			CK73EF1C105Z	CHIP C 1.0UF Z		
C125,126			CK41DB1H331K	CYLND CHIP C 330PF K		
C201			CE04NW1C100M	ELECTRO 10UF 16WV		
C202			CE04NW1H010M	ELECTRO 1.0UF 50WV		
C203			CC41DSL1H100J	CYLND CHIP C 10PF J		
C204			CE04NW1C100M	ELECTRO 10UF 16WV		
C205			CK41DF1E223Z	CYLND CHIP C 0.022UF Z		
C207			C90-1735-08	ELECTRO 1000UF 6.3WV		
C208,209			CE04NW1C100M	ELECTRO 10UF 16WV		
C211			CE04NW1A330M	ELECTRO 33UF 10WV		
C213,214			CF92V1H333J	MF 0.033UF J		
C215			CK41DX1C332M	CYLND CHIP C 3300PF M		
C216			CK41DY1C103M	CYLND CHIP C 0.010UF M		
C217			CC41DSL1H270J	CYLND CHIP C 27PF J		
C218,219			CE04NW1C100M	ELECTRO 10UF 16WV		
C220,221			CE04NW1C220M	ELECTRO 22UF 16WV		
C225,226			CK41DB1H750K	CYLND CHIP C 75PF K		
C301			CE04NW1C470M	ELECTRO 47UF 16WV		
C302			CE04NW1A470M	ELECTRO 47UF 10WV		

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C303			CK73EB1E104K	CHIP C 0.10UF K		
C304			CE04NW1H0R1M	ELECTRO 0.1UF 50WV		
C305			CE04NW1A330M	ELECTRO 33UF 10WV		
C306			CK41DY1C103M	CYLND CHIP C 0.010UF M		
C307			C90-1736-08	ELECTRO 0.22F 5.5WV		
C308			CE04NW1A221M	ELECTRO 220UF 10WV		
C309			CE04NW1A330M	ELECTRO 33UF 10WV		
C310			CK41DB1H471K	CYLND CHIP C 470PF K		
C311			C90-1263-05	ELECTRO 100UF 16WV		
C312			CE04NW1A470M	ELECTRO 47UF 10WV		
C313			C90-1733-08	ELECTRO 3300UF 16WV		
C314,315			CK73EB1E104K	CHIP C 0.10UF K		
C320			CE04NW1C330M	ELECTRO 33UF 16WV		
C323			CK41DF1E223Z	CYLND CHIP C 0.022UF Z		
C324,325			CK41DY1C103M	CYLND CHIP C 0.010UF M		
C329			CE04NW1C100M	ELECTRO 10UF 16WV		
C330			CE04NW1HR22M	ELECTRO 0.22UF 50WV		
C401			CK41DB1H471K	CYLND CHIP C 470PF K		
CT1			L33-0357-08	CHOKE COIL		
X301			L78-0252-08	RESONATOR		
R1 -4			RD41DB2B332J	CYLND CHIP R 3.3K J 1/8W		
R5			RD41DB2B473J	CYLND CHIP R 47K J 1/8W		
R6 -10			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R11			RD41DB2B473J	CYLND CHIP R 47K J 1/8W		
R12			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R13			RD41DB2B102J	CYLND CHIP R 1.0K J 1/8W		
R14			RD41DB2B272J	CYLND CHIP R 2.7K J 1/8W		
R15			RD41DB2B681J	CYLND CHIP R 680 J 1/8W		
R16			RD41DB2B561J	CYLND CHIP R 560 J 1/8W		
R17 ,18			RD41DB2B432J	CYLND CHIP R 4.3K J 1/8W		
R19 ,20			RD41DB2B102J	CYLND CHIP R 1.0K J 1/8W		
R101			RD41DB2B223J	CYLND CHIP R 22K J 1/8W		
R102-105			RD41DB2B104J	CYLND CHIP R 100K J 1/8W		
R106			RD41DB2B102J	CYLND CHIP R 1.0K J 1/8W		
R108			RD41DB2B913J	CYLND CHIP R 91K J 1/8W		
R109			RD41DB2B104J	CYLND CHIP R 100K J 1/8W		
R110			RD41DB2B105J	CYLND CHIP R 1.0M J 1/8W		
R111			RD41DB2B913J	CYLND CHIP R 91K J 1/8W		
R112			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R113			RD41DB2B561J	CYLND CHIP R 560 J 1/8W		
R114			RD41DB2B123J	CYLND CHIP R 12K J 1/8W		
R115			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R116			RD41DB2B123J	CYLND CHIP R 12K J 1/8W		
R117			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R118			RD41DB2B122J	CYLND CHIP R 1.2K J 1/8W		
R119			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R120			RD41DB2B122J	CYLND CHIP R 1.2K J 1/8W		
R121			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R122			RD41DB2B681J	CYLND CHIP R 680 J 1/8W		
R124			RD41DB2B681J	CYLND CHIP R 680 J 1/8W		
R126			RD41DB2B104J	CYLND CHIP R 100K J 1/8W		
R127			RD41DB2B102J	CYLND CHIP R 1.0K J 1/8W		
R128			RD41DB2B472J	CYLND CHIP R 4.7K J 1/8W		
R201			RD41DB2B223J	CYLND CHIP R 22K J 1/8W		

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PARTS LIST

* New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Telle ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
R202-205			RD41DB2B104J	CYLND CHIP R 100K J 1/8W		
R208			RD41DB2B913J	CYLND CHIP R 91K J 1/8W		
R209			RD41DB2B104J	CYLND CHIP R 100K J 1/8W		
R210			RD41DB2B105J	CYLND CHIP R 1.0M J 1/8W		
R211			RD41DB2B913J	CYLND CHIP R 91K J 1/8W		
R212			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R213			RD41DB2B561J	CYLND CHIP R 560 J 1/8W		
R214			RD41DB2B123J	CYLND CHIP R 12K J 1/8W		
R215			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R216			RD41DB2B123J	CYLND CHIP R 12K J 1/8W		
R217			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R218			RD41DB2B122J	CYLND CHIP R 1.2K J 1/8W		
R219			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R220			RD41DB2B122J	CYLND CHIP R 1.2K J 1/8W		
R221			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R222			RD41DB2B681J	CYLND CHIP R 680 J 1/8W		
R224			RD41DB2B681J	CYLND CHIP R 680 J 1/8W		
R226			RD41DB2B104J	CYLND CHIP R 100K J 1/8W		
R227			RD41DB2B102J	CYLND CHIP R 1.0K J 1/8W		
R228			RD41DB2B472J	CYLND CHIP R 4.7K J 1/8W		
R301,302			RD41DB2B472J	CYLND CHIP R 4.7K J 1/8W		
R303			RD41DB2B473J	CYLND CHIP R 47K J 1/8W		
R313			RD41DB2B102J	CYLND CHIP R 1.0K J 1/8W		
R317			RD41DB2B561J	CYLND CHIP R 560 J 1/8W		
R325			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R326			RD41DB2B473J	CYLND CHIP R 47K J 1/8W		
R329			RD41DB2B561J	CYLND CHIP R 560 J 1/8W		
R330			RD41DB2B391J	CYLND CHIP R 390 J 1/8W		
R331,332			RD41DB2B102J	CYLND CHIP R 1.0K J 1/8W		
R334			RD41DB2B563J	CYLND CHIP R 56K J 1/8W		
R337			RD41DB2B473J	CYLND CHIP R 47K J 1/8W		
R338			RD41DB2B472J	CYLND CHIP R 4.7K J 1/8W		
R340			RD41DB2B473J	CYLND CHIP R 47K J 1/8W		
R341			RD41DB2B222J	CYLND CHIP R 2.2K J 1/8W		
R342			RD41DB2B473J	CYLND CHIP R 47K J 1/8W		
R351			RD41DB2B102J	CYLND CHIP R 1.0K J 1/8W		
R354			RD41DB2B101J	CYLND CHIP R 100 J 1/8W	ET	
R354			R92-0670-05	CHIP R 0 ΩHM	KM	
R357			RD41DB2B473J	CYLND CHIP R 47K J 1/8W	ET	
R358			RD41DB2B473J	CYLND CHIP R 47K J 1/8W		
R360			RD41DB2B103J	CYLND CHIP R 10K J 1/8W		
R361,362			RD41DB2B102J	CYLND CHIP R 1.0K J 1/8W		
R366,367			RD41DB2B473J	CYLND CHIP R 47K J 1/8W		
R401			RD41DB2B102J	CYLND CHIP R 1.0K J 1/8W		
R402			RD41DB2B101J	CYLND CHIP R 100 J 1/8W		
R407			RD41DB2B102J	CYLND CHIP R 1.0K J 1/8W	ET	
R408			RD41DB2B103J	CYLND CHIP R 10K J 1/8W	ET	
RY301,302			S51-2086-08	RELAY		
D1			RD4.3ES(B1)	ZENER DIODE		
D2			1SS119	DIODE		
D3			RD5.1ES(B2)	ZENER DIODE		
D4			1SS119	DIODE		
D301			1SS119	DIODE		

E: Scandinavia & Europe K: USA P: Canada
U: PX(Far East, Hawaii) T: England M: Other Areas
UE: AAFES(Europe) X: Australia

⚠ indicates safety critical components.

PARTS LIST

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Telle ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
D302			RD9.1ES(B2)	ZENER DIODE		
D303,304			DSA1A2	DIODE		
D307,308			RD5.1ES(B2)	ZENER DIODE		
D310,311			RD6.8ES(B2)	ZENER DIODE		
D313			1SS119	DIODE		
D314			RD6.2ES(B1)	ZENER DIODE		
D323			RD9.1ES(B2)	ZENER DIODE		
D324,325			1SS119	DIODE		
D327			1SS119	DIODE		
D328			RD5.1ES(B2)	ZENER DIODE		
IC101,102			LA6462M	IC(OP AMP X2)		
IC201,202			LA6462M	IC(OP AMP X2)		
IC301			LA6462M	IC(OP AMP X2)		
IC302			LC7537AN	IC(VOLUME,TONE)		
IC303			LA6462M	IC(OP AMP X2)		
IC304			S-8054HN-CB	IC(VOLTAGE DETECTOR)		
IC305			75106G-RMX2VF	IC(MICROPROCESSOR)		
IC306			S-8054HN-CB	IC(VOLTAGE DETECTOR)		
Q101,102			DTC343TS	DIGITAL TRANSISTOR		
Q201,202			DTC343TS	DIGITAL TRANSISTOR		
Q301-303			DTC114ES	DIGITAL TRANSISTOR		
Q304			2SD1388	TRANSISTOR		
Q305			DTC114ES	DIGITAL TRANSISTOR		
Q306			DTA114ES	DIGITAL TRANSISTOR		
Q307			DTC114ES	DIGITAL TRANSISTOR		
Q310			DTC114ES	DIGITAL TRANSISTOR		
Q311			2SB1202	TRANSISTOR		
Q312			DTC114ES	DIGITAL TRANSISTOR		
Q313			2SB733	TRANSISTOR		
Q314			2SD1388	TRANSISTOR		
Q315			DTA143XS	DIGITAL TRANSISTOR		
Q316			DTC124ES	DIGITAL TRANSISTOR		
Q319			2SC3851	TRANSISTOR		
Q401			DTC114ES	DIGITAL TRANSISTOR	ET	

E: Scandinavia & Europe K: USA P: Canada
U: PX(Far East, Hawaii) T: England M: Other Areas
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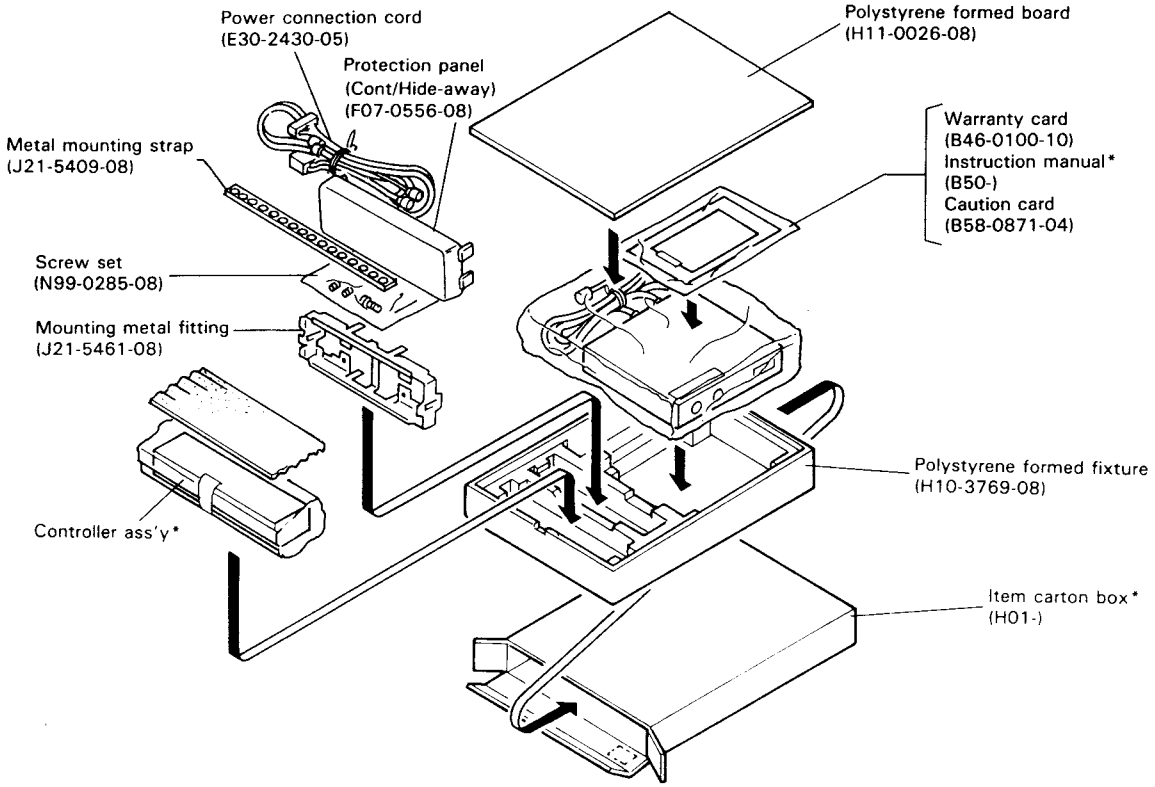
⚠ indicates safety critical components.

PACKING



* Refer to parts list on page 24.

KCA-R200

SPECIFICATIONS

Audio Section

Tone Action (BASS) ..... 100 Hz ± 10 dB
(TREBLE) ..... 10 kHz ± 10 dB
Preout Level ..... 1.0 V

General

Operating Voltage ..... 14.4 V (11 ~ 16 V)
Operating Temperature ..... – 10 ~ 50 °C
Size (W × H × D)
Controller ..... 172 × 48 × 23 mm
(6-3/4 × 1-7/8 × 7/8 in.)
Hide-away unit ..... 178 × 25 × 135 mm
(7 × 1 × 5-5/16 in.)
Weight
Controller ..... 0.3 kg (0.7 lb)
Hide away unit ..... 0.7 kg (1.5 lb)

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

KENWOOD poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

KENWOOD strebt ständige, Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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